

**Appendix S3: Assessment of Sites in Hambleton and Harrogate District (Split)
and Hambleton and Richmondshire District (Split)**

Joint Minerals and Waste Plan

Preferred Options Consultation

Sustainability Appraisal Update Report

Volume 2: Assessment of Sites

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MJP14 – Ripon Quarry, North Stainley

Site Name	Site MJP14 Ripon Quarry, North Stainley – 2 locations: 430558 476313 - Pennycroft and Thorneyfields; 429456 477821 – Manor Farm West, Harrogate
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel
Size	30.22 ha (Pennycroft and Thorneyfields); 9.52 ha (Manor Farm West)
Proposed life of site	15 years (Pennycroft and Thorneyfields); Unknown at present (Manor Farm West)
Notes	Possible restoration: Lake, reed bed and wet woodland (Pennycroft and Thorneyfields); Unknown at present (Manor Farm West). Proposed extensions to existing quarry. Pennycroft and Thorneyfields area is subject to a current application (NY/2011/0429/ENV) which is awaiting determination. No current application for Manor Farm West.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Assumptions: the lifetime of the site is currently unknown however for the purposes of this assessment, it has been assumed that the site will be operational in the short and medium term and has been restored in the long term.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	Proximity of international / national and local designations and key features Natura 2000: 10km west - North Pennine Moors Special Protection Area / Special Area of Conservation (SPA/SAC); Site of Special Scientific Interest (SSSI): Large southern site lies adjacent to (possibly with some overlap) Ripon Parks SSSI; Sites of Importance for Nature Conservation (SINC): The following SINCs recorded nearest northern site : Rush Wood, East Tanfield (0.35 km); Mill Bank (adjacent); The Jetty (adjacent); Low Green (0.3km); Little Mill Bank (0.74km); Howgrave Wood (1.08 km); West Tanfield Quarry (0.988 km). Nearest SINC to southern site : Norton Mills (1.03km), Hall Garth Ponds (1.34km). Local Nature Reserve (LNR): Nosterfield	✓	✓	✓	✓	-	-	+
						--	0	++

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
connectivity	<p>2km north-west.</p> <p>UK Priority Habitats: Northern site: Deciduous woodland immediately adjacent (with slight overlap) along south west edge and circa 20 metres from northern edge, 20m from east edge. Southern site: Deciduous woodland adjacent to north, south and east of site (possibly some overlap). South-west corner of site also contains some deciduous woodland (c5% of area) according to map. Woodland is also around western edges 60 to 70 metres away.</p> <p>Ecological Networks: Living Landscape: Site entirely within River Ure Corridor; England Habitat Network (EHN): Core woodland envelope of EHN overlaps north, east and south-west of site southern site and western edge of northern site.</p> <p><u>Summary of effects on designated sites and important features for biodiversity / geodiversity</u> Due to distance and type of development it is considered unlikely that there will be any significant effect on Natura 2000 sites. There may, however, be potential direct and indirect impacts upon the SSSI – particularly in relation to changes in hydrology / effects on aquifer. Some habitats within the SSSI are groundwater fed, as are habitats in the current quarry restoration and SINCs. Operations within the quarry have the potential to impact on these habitats through draw down of water during pumping. The EIA for the current planning application is looking at the significance of these impacts and developing mitigation where necessary. The outcome of this is not yet available and therefore the level of impact is not currently known.</p> <p>In relation to the north extension – the river meander has similar habitats to High Batts SSSI. Here the mineral may not be as deep. In the southern area they are undertaking some further work in relation to High Batts. In the planning application they are still very much working out what impacts might be, but it will be important that mitigation is linked to abating possible effects on the High Batts Nature Reserve as well as the SSSI. Monitoring will be critical.</p> <p>Ecological surveys for the current planning application have detailed that site is mostly arable farmland with trees, hedgerow and woodland as boundary features. Site has the potential to support foraging bat, badger, otter, nesting and farmland birds. Great crested newt is known locally from ponds within Ripon Parks SSSI</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
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	<p>and features that could support great crested newt are noted on the northern site, though the site is acknowledged as suboptimal¹.</p> <p>Invasive species are known to this river corridor and the connectivity with the river and instances of flooding provide an opportunity for species to be spread, though this does not represent a significant increase from the current threat.</p> <p>In terms of geodiversity, these sites may have long term implications in terms of preventing restoration of the geomorphology of the river. The potential for the river to move in its flood plain should not be constrained by the creation of landforms which prevent that movement, e.g. proposals for lakes or bund.</p> <p>There are cumulative negative impacts associated with quarrying in this area, including loss of habitat and disturbance to species which may result from this quarry combined with the existing Ripon Quarry and Potgate Quarry. Cumulative benefits associated with appropriate restoration at this and other quarries, including creation of priority habitats, are likely to occur in the long term.</p> <p>As with other wet restoration schemes restoration to deep lakes is less beneficial to biodiversity, so shallow areas and other habitats such as wet woodland / other priority habitat can offer greater benefits.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Nitrate Vulnerable Zone (NVZ): Site in NVZ for surface water and groundwater; Source Protection Zone (SPZ): Not in or adjacent to SPZ; River Basin Management Plan (RBMP): Nearest water body, at 0m east is 'River Ure from Thornton Steward Beck to River Skell' - ecological quality is moderate / chemical quality is 'does not require assessment; Overall status is moderate; Objective - good by 2027. No RBMP lakes present. RBMP groundwater: Site in Swale, Ure, Nidd, Ouse (SUNO) Magnesian Limestone groundwater body (quantitative quality good / chemical quality good / at risk). Objective - good by 2015.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of</p>	✓	✓	✓	✓	--	--	?

¹ See Natural England, Letter to North Yorkshire County Council dated 3 February, 2012

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>time. At low flows new extraction licenses may be more restricted.</p> <p>Summary of effects on water quality The Environmental Statement (ES) for the current Pennycroft and Thorneyfields site identifies dewatering as a key impact on groundwater and associated receptors. It is proposed to dewater the site with discharge used for mineral washing (then settling out and discharge) with the remainder being discharged to the Ure. This is expected to create a temporary drawdown in groundwater levels during the working period. This could affect the groundwater under the Ripon Parks SSSI, though the hydraulic connection between the surface water and the groundwater is considered to be limited. Nonetheless, the application predicts the need to continually monitor water levels and “a water level management plan will be put in place”.² The Ure is also identified as a receptor for impacts as this will recharge the site (resulting in water loss); though through discharge of clean water to the river this is predicted to balance the situation.</p> <p>Groundwater drawdown may also affect the Lightwater Stream to the south, though “according to the geological map the vicinity of the site comprises alluvium and clay till which will limit the amount of outflow from the stream”³. Other impacts recognised in the ES include possible pollution of groundwater from fluid loss / spillage from plant and ingress of suspended solids to the river Ure. Mitigation measures are proposed for all these impacts to bring these impacts within acceptable levels. However, without mitigation, such impacts could be significant.</p> <p>In the northern Manor Farm West Site a similar range of impacts could occur (though possibly on a lower scale as the site is smaller).</p> <p>As this site is not in a Source Protection Zone it may be less vulnerable than some other sites. Restoration may help to provide better protection to groundwater, depending on its design (though movement of</p>							

² Hanson Quarry Products Europe Limited, Extension to Existing Sand and Gravel Workings at Ripon Quarry, North Stainley, North Yorkshire: Environmental Statement: Non-Technical Summary.

³ Hanson Quarry Products Europe Limited, Extension to Existing Sand and Gravel Workings at Ripon Quarry, North Stainley, North Yorkshire: Environmental Statement Section 7: Hydrogeology and Hydrology.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	overburdens during restoration may have water impacts of its own).							
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site has reasonable access to the A1 giving reasonably good access to York, Leeds and Teesside; Access: Confirmed to be the existing Ripon Quarry access onto A6108 (approximately 460m south of North Stainley) with the mineral to be moved to the existing plant site without passage on the highway; Light Vehicles: 16 (application details NY/2011/0429/ENV); HGV Vehicles: 80-150* (Source: application details NY/2011/0429/ENV including comment *if additional processing capacity installed);</p> <p>Net change in daily two-way trip generations: Light vehicles: 0; HGVs: 0. Transport assessment rating: green.</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 11.7 km east / Railhead: 49.7 km south-east; Strategic Road: A1 4.2 km east (direct); Canal / Freight waterway: 5.6km south.</p> <p>Summary of effects on transport 80 - 150 HGVs per day would access the site turning on and off the road south of North Stainley (however, journeys would also be saved by processing the mineral at the adjacent plant site). HGV movement is acceptable on to the A6108, but minor works may be required to improve the existing access arrangements. A traffic assessment and/ or travel plan would be required. The current planning application suggests that vehicle numbers are in line with historic numbers from the existing plant, and the traffic assessment undertaken to support the Joint Plan indicates that the A6108 is currently used by around 3000 vehicles per day, including 300 HGVs, so levels would effectively remain the same. However, in this assessment we have viewed traffic impacts as a continuation of impacts into the longer term and have noted a minor negative effect due to the continued number of HGVs (which otherwise would have been expected to cease) and the need for further improvements to access. There are few local opportunities for sustainable transport.</p> <p>It is also noted that increase demanded at Clock tower junction in Ripon will need to be established and may</p>		✓		✓	-	-	-
						?	?	?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	need a revised routing plan, adding uncertainty to the assessment.							
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of AQMA. Norton Mills 260m north. North Parks 120m south. Badger Bank (settlement) 450m north. Norton Conyers 750m east of southern site. East Tanfield is 160m from northern site with scattered individual properties within 500m.</p> <p>Summary of effects on air quality The Environmental Statement (NTS) for the current Pennycroft and Thorneyfields site states “<i>The likelihood of problems caused by dust will be largely influenced by the effectiveness of on-site environmental control.given the intended dust control measures and method of working....the site can continue to be operated with minimal impact on nearby residential properties and boundary locations</i>”.⁴ In addition “<i>A full PM10 assessment in line with the latest recommendations has been undertaken and this clearly shows that the Air Quality Objectives are not expected to be exceeded</i>”. However, as this assessment considers effects without mitigation, effects from the whole site, including the northern part (as well as a continuation of traffic) are considered to be moderate and mitigatable, with the main part of the effect coming from the possible impact on East Tanfield.</p> <p>Priority woodland adjacent to sites is likely to suffer a negligible effect from dust and pollution deposition.</p>		✓	✓	✓	-	-	-
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): 95% of southern site in grade 3. Thin strip of grade 2 along eastern boundary. Northern site is Grade 2. Greenfield site - no known risk factors for contaminated land. Site does not lie within or adjacent to a development high risk area (coal mining).</p> <p>Summary of effects on soil / land The Environmental Statement’s detailed assessment concluded that 65% of the southern site is best and most versatile (BMV) Land. The northern site is assumed to be BMV</p>	✓		✓		-	-	-
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⁴ Citation needed

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	land (though detailed assessment may refine this as with the southern site). This would amount to a loss of 19.63ha of BMV land.							
6. Reduce the causes of climate change	<p><u>Proximity of factors relevant to exacerbating climate change</u> Deciduous woodland immediately adjacent (with slight overlap) along south west edge and circa 20 metres from northern edge, 20 m from east edge. Southern site: Deciduous woodland adjacent to north, south and east of site (possibly some overlap). Site visit revealed trees and a hedgerow on site.</p> <p><u>Summary of effects on climate change</u> A small amount of carbon storage habitat may be lost, though the effect of this on this objective is negligible. The site would however be expected to generate a large amount of freight. While access to the road network is good, it would still need to travel some distance to likely markets. Effects on this objective are moderate to major negative in the short and medium term, falling to minor negative if the northern site continues to operate in the longer term.</p>	✓		✓		-	-	-
7. To respond and adapt to the effects of climate change	<p><u>Proximity of factors relevant to the adaptive capacity of a site</u> Flooding: Southern sites entirely within flood zone 3. In terms of surface water flooding there are occasional patches of mainly 1/1000 year risk (circa 5%). Smaller patches of 1 in 30 and 1 in 100 risk, (together totalling c1%). Northern site is affected by a small area of Flood Zone 2 (20%); Ouse CFMP: Upper Ure and Swinney Beck / Policy 6; CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Ecological Networks: Living Landscape: Site entirely within River Ure Corridor NY10; England Habitat Network: Core woodland envelope of EHN overlaps north, east and south-west of site southern site and western edge of northern site.</p> <p><u>Summary of effects on climate change adaptation</u> Although site is water compatible, the high risk of flooding to this site suggests the need for emergency planning. In the longer term there is the potential for these sites to offer flood storage to the wider catchment. Ecological networks are unlikely to be affected due to these sites not disrupting significant parts of the corridors. However, restoration in the long term would</p>	✓	✓	✓	✓	-	-	0 ++

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		P	T	D	I	S	M	L
	strengthen networks.							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified</p> <p><u>Summary of effects on resource usage</u> This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 5.46 million tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue until such time as extraction ceases.</p>	✓			✓	--	--	-
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified</p> <p><u>Summary of effects on the waste hierarchy</u> The site would not specifically deal with waste. No impacts identified.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and	<p><u>Proximity of historic environment receptors</u> Conservation areas: none within 1km; Registered Parks and Gardens: Southern part of site circa 80m from Norton Conyers Registered Parks and Garden (Grade II) (Designation ID 1,0001, 068). Northern part is 1.9 km away from Norton Conyers; Registered battlefields: None within 5km; World Heritage Sites: None within 5km.</p> <p>Scheduled Monuments: Northern part of site is circa 170 m south east from East Tanfield Deserted Medieval Village (Designation ID 1,016,260); 1.6km to south of site is 'Henge Monument 300m North of Runwick'; 0.66 km to north is 'Round barrow 425m north west of Rushwood Hall' (Designation ID 1,016,</p>	✓		✓		--	--	--

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character	<p>262); 0.77km to north is Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill Round Barrow (Designation ID 1,004, 912). Southern part: 1.4 km west of site is Castle Dikes Defended Roman Villa. Circa 1.62 km to south east is 'Hutton Hall (site of)'. </p> <p>Listed buildings: 1 listed building c150m to west - Manor Farm House (NHLE No. 1,190, 120) Grade II. A further listed building lies 0.68 km away (Sleningford Grange Designation ID 1,150, 579, Grade II); Named deigned landscapes (from pre-validated dataset derived from HLC); HNY22399 (no name listed) ornamental parkland 70m east of southern part of site, 2 unnamed areas 1.3km south-west and 1.6km west of northern area of site.</p> <p>Historic Land Characterisation (HLC) Broad Type - Enclosed land / HLC Type – Modern improved fields; The proposed allocation sites lie within an area of high archaeological significance and sensitivity, which contains a number of prehistoric monuments and deposits that have been the subject of recent investigation and publication. This Thornborough Henges landscape is considered to be internationally significant. In addition, the scheduled deserted medieval village of East Tanfield lies immediately to the west of the Manor Farm West proposed allocation site. In addition, undesignated archaeology includes evidence of finds and features of early prehistoric date and Bronze Age round barrow burial sites.</p> <p>Trenches in the northern area (Manor Farm West) identified evidence of multi-period human activity dating from the Mesolithic, through the Neolithic, Bronze Age and Iron Age to the Romano-British period.</p> <p>There were no archaeological features or deposits identified in the southern extension area (Pennycroft and Thorneyfields); although there are deposits of Iron Age/Romano-British date within the top soil storage area which it is assumed will be excluded from any direct impacts.</p> <p><u>Summary of effects on the historic environment</u> The Historic Landscape Characterisation (HLC) type of these two areas is modern improved fields. The northernmost proposed allocation site is a smaller part of a much larger area of similar character type, of which the legibility is partial, and the legibility of the southern part is fragmentary. Proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area. However, it is acknowledged that within the sites, the</p>							

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	<p>historic landscape character will become invisible as development will replace an earlier field system. As 20% of the overall HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>There is however an issue with the impact on the registered parkland of Norton Conyers, which will have direct views of the Pennycroft site. It will be important for mitigation to be aligned with Norton Conyers.</p> <p>The Manor Farm West site lies within the setting of the scheduled monuments of Thornborough Henges and also East Tanfield deserted village so the landscape may be sensitive for those reasons. However, it is well screened from these receptors</p> <p>There is certain high archaeological potential for the survival of archaeological remains within the Manor Farm West (northern) site from the early prehistoric period onwards. It is known that allocating this site would cause the loss of these archaeological remains if the site is extracted without mitigation.</p> <p>The existing archaeological deposits recorded by aerial photography, geophysics and trial trenching in the Manor Farm West (northern) site have been identified by English Heritage as being 'demonstrably of equivalent significance' to designated heritage assets as set out in NPPF policy 139 and for that reason are assessed as major negative. Remains of lesser significance were revealed in the Pennycroft and Thorneyfields (southern) site, and so the impact there is assessed as minor negative.</p> <p>It is assumed that the archaeological impact will occur throughout the duration of extraction and will result in the total destruction of the undesignated archaeological remains.</p>							
11. To protect and enhance the quality and character of landscapes and	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10 km; Areas of Outstanding Natural Beauty (AONBs): Northern site: Nidderdale is 2.9km south-west. Southern site: Nidderdale 3km west; Heritage Coast: None within 10 km; ITE land: Norton Conyers ITE land is 66m east of the southern site and 1.83 km south-east of northern site; National Character Area (NCA): Southern Magnesian Limestone (both sites). Green Belt: Not within Green Belt.</p> <p>North Yorkshire Landscape Character Assessment (NYLCA): Northern and southern Site are landscape</p>	✓		✓		--	--	0

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
townscapes	<p>character type 24: river floodplain (farmed, lowland and valley landscapes). High visual sensitivity (as a result of the predominantly open character and flat landform. which facilitates long distance open views across the landscape). High ecological sensitivity as result of the patchwork of habitats. High landscape and cultural sensitivity as a result of the presence of numerous historic settlement sites and designated landscapes, coupled with a dynamic landscape pattern of narrow river corridors. District LCA: Northern Site mostly in landscape 5b of Hambleton LCA with a small area in the west in 6a.Southern site in landscape 'River Ure Corridor' in Harrogate LCA.</p> <p>Intrusion: Undisturbed. The area is fairly tranquil, but not as much as the CPRE maps suggest. Urban intrusion: The wider context is rural but there is local intrusion from the existing active quarry. The A6108 corridor, North Stainley and the Lightwater Valley theme park are 1-2 km to the west. Light pollution: Low – 44-56 on a scale of 1-255, with 1 representing maximum darkness.</p> <p><u>Summary of effects on landscape / townscape</u> There are no predicted impacts on nationally or locally designated landscapes. Similarly, local settlements are not likely to be affected, although North Stainley lies just over 1 km to the west of the Manor Farm West site. There is intervening woodland and riverside screening along the River Ure. The current quarry does not impact on the settlement.</p> <p>The floodplain landscape type within which the Pennycroft and Thorneyfields site and parts of the Manor Farm West site are located is being heavily exploited at a number of locations in North Yorkshire, resulting in large scale disturbance and the creation after restoration of areas of new landscape character which are likely to be unstable in the long term because they do not reflect geomorphological / fluvial processes as the previous landscapes largely did (although modified and protected by man in more recent times). However within the timescale of this assessment the wet restoration scheme proposed can be accommodated, and can be acceptable on visual and landscape character grounds. There is however an issue with the impact on the registered parkland of Norton Conyers which will have direct views of the Pennycroft site. It will be important for mitigation to be aligned with Norton Conyers.</p> <p>The Manor Farm West site lies within the setting of the scheduled monuments of Thornborough Henges and also East Tanfield deserted village so the landscape may be sensitive for those reasons. However, it is well</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>screened from these receptors. There could also be direct impacts on vistas from the Ripon Rowell and on the river corridor setting. There may also be cumulative effects from 'a possible future quarried landscape' / from other sites.</p> <p>It would be desirable to allow the river in this area to meander (a big lake would prevent the meander). Historic meanders are visible.</p> <p>Levels of visual intrusion will not increase as the sites are low lying and largely screened by trees from views from the wider landscape. .</p> <p>Whilst the two sites are extensions of an existing quarry, they are around 1.3 km apart, and there are some different historic landscape issues for each.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site has reasonable access to the A1 giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Summary of effects on sustainable economic growth</u> This site would ultimately result in 5.46 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight jobs). Restoration, combined with that of other nearby sites might create something of a minor tourist attraction.</p>	✓		✓	✓	++	++	+
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Index of Multiple Deprivation (IMD) Area - Kirkby Malzeard / Wathvale - Not in worst 20%.</p> <p>Norton Mills is 260m north. North Parks is 120m south. Badger Bank (settlement) is 450m north. Norton Conyers is 750m east. North Stainley lies to the west (620m) of northern site, while Wath is 1.4km east of southern site. Nunwick is 1.87km south.</p> <p><u>Summary of effects on vitality / viability</u> The site would support a small number of jobs leading to minor positive impacts in the short and medium term and negligible to minor positive impacts in the long term.</p>		✓	✓	✓	+	+	0 +

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		P	T	D	I	S	M	L
	Whilst the site would provide a source of sand and gravel which could aid future development, it is considered that the immediate settlements are unlikely to directly benefit in any significant way. In the long term it is considered that the restoration scheme has the potential to boost tourism in the area through the creation of new habitats (which could be made accessible).							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Rights of way: bridleway 15.103/8/1 comes within 20m west of the northwest corner of southern site. The long distance right of way called the 'Ripon Rowel' follows this part of the bridleway also at 20m. Bridleway 10.44/3/1 is 370m north-west. Bridleway 10.44/6/1 is 490m north-west.</p> <p>Summary of effects on recreation, leisure and learning Although there is little in terms of access at the northern site Bridleway 15.103/8/1 is likely to be affected by noise and could be affected by dust and views which would detract from the experience of users for a short distance when this area is being worked. The site is also close to the Ripon Rowel. The current application, by way of mitigation, proposes to separate the access track from the Bridleway / Ripon Rowell walk where they intersect. (Working this part of the site would take place in phase 2 – considered to be short term in our assessment, though noise impacts could conceivably also be experienced in later phases too to a lesser degree). While a different application may ultimately come forward for this site we have scored these impacts without mitigation assuming the development would be phased in similar way to the current application.</p>		✓	✓		-	0	0
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Norton Mills is 260m north. North Parks is 120m south. Badger Bank (settlement) 450m north. Norton Conyers is 750m east. Nearest farm building is 850m south. East Tanfield is 300m from northern site with scattered individual properties within 500m. No schools, hospitals, health centres or clinics within 1km. High pressure gas pipeline Feeder 7 crosses southern site.</p> <p>Summary of effects on health and wellbeing The high pressure gas pipeline would require re-routing for safety purposes. There is some concern over possible dust and noise impacts at East Tanfield (see SA objective 4). A continuation of traffic would occur on the A6108, though the current low volumes on this road</p>		✓	✓	✓	-	-	-
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					?	?	?	

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	mean that air pollution and accident effects are of low significance							
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Flooding: Southern sites entirely within flood zone 3. In terms of surface water flooding there are occasional patches of mainly 1/1000 year risk (circa 5%. Smaller patches of 1 in 30 and 1 in 100 risk, together totalling c1%). Northern site is affected by a small area of Flood Zone 2 (20%); Ouse Catchment Flood Management Plan (CFMP): Upper Ure and Swinney Beck / Policy 6.</p> <p>Summary of effects on flooding Although site is water compatible, the high risk of flooding to this site suggests the need for emergency planning. In the longer term there is the potential for these sites to offer flood storage to the wider catchment. .Flood risk assessment is required.</p>	✓	✓	✓	✓	-	-	0 ++
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Summary of effects on a changing population The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the plan area.</p>		✓	✓		++	++	+
Cumulative effects	<p>Cumulative / Synergistic effects</p> <p><u>Planning context:</u> North Stainley lies to the west (620m) of northern site, Wath is 1.4km east of southern site, Nunwick is 1.87km south (all Harrogate). North Stainley and Wath are Group C settlements (only very limited growth). Although the LDF has no allocations DPD in place, the earlier 2001 Local Plan shows no allocations within 200m this site.</p> <p><u>Other Joint Minerals and Waste Plan Sites:</u> MJP06 (2.9 km north), MJP38 (1.4km west), MJP07 (3.3 km</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score			
		P	T	D	I	S	M	L	
	<p>north) MJP39 (1.65 km north), MJP57 (2.63m west), MJP10 (1.88km west) all within 5km.</p> <p><u>Historic Minerals and Waste Sites</u>: Active sand and gravel site at Ripon, between northern and southern sites. Active Magnesian limestone site at Potgate 2.36 km west. Dormant sand and gravel at Haw Wood (3.7km W). Active sand and gravel site at Nosterfield - 2.5km north. Numerous historic applications are clustered around Nosterfield (c3.8km north-west), West Tanfield (1.4km north-west) and North Stainley (0.2km north-west). Group of historic application to south-west of North Stainley (1.7km west). Fewer applications to south (2 around Sutton Grange (1.9km south). None to west. (Measurements from southern site). Landfill: Nearest is 'land to the north of Moor Lane' 1.9km north-west.</p> <p>There may be cumulative landscape effects from 'a possible future quarried landscape' / from other sites</p>								
		✓		✓	✓	-	-	-	
		?		?	?			0	
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.								
Score	Significance								
++	The Site option is predicted to have major positive effects on the achievement of the SA objective. For example, this may include a significant contribution to issues or receptor of more than local significance, or to several issues or receptors of local significance.								
+	The Site option is predicted to have minor positive effects on achievement of the SA objective. For example, this may include a significant contribution to an issue or receptor of more local significance.								
0	The Site option will have no effect on the achievement of the SA objective ⁵ .								
-	The Site option is predicted to have minor negative effects on the achievement of the SA objective. For example, this may include a negative								

⁵ This includes where there is no clear link between the site SA objective and the site

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	contribution to an issue or receptor of local significance.							
--	The Site option is predicted to have major negative effects on the achievement of the SA objective. For example, this may include a significant negative contribution to an issue or receptor of more than local significance.							
?	The impact of the Site option on the SA objective is uncertain.							

Mitigation requirements identified through Site Assessment process
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues • Design to mitigate impact on best and most versatile agricultural land • Design of development and landscaping of site to mitigate impact on: heritage assets (Scheduled Monuments, archaeological remains, Listed Buildings, Conservation Area, Registered and unregistered park and gardens), local landscape features and their respective settings • Design to include suitable flood risk assessment, attenuation and surface water drainage • Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) • Design to include suitable arrangements for access and local roads • Appropriate arrangements for control of and mitigation of the effects of noise, dust, etc. • Appropriate restoration scheme using opportunities for habitat creation

MJP21 – Land at Killerby

Site Name	Site MJP21 (Land at Killerby, Richmondshire and Hambleton)
Current Use	Current Use: Agriculture and woodland
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 213 ha, of which 122 ha proposed for extraction
Proposed life of site	Proposed life of site: 16 years
Notes	Notes: Proposed new quarry and subject to a current application (NY/2010/0356/ENV) that is awaiting determination. Possible restoration: agriculture, marshland, lakes, woodland.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geodiversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 14km west - North Pennine Moors SPA/SAC; SSSI: 1.7 km from nearest SSSI (Swale Lakes); SINC: Nearest SINC lies partly within northern boundary of site (SE29-04 River Swale, Great Langston to Kiplin). Park Plantation SINC is 1.21 km away. Great Langton Pond (1.56 km). Kirkby Wood (1.25km).</p> <p>UK Priority Habitats: Deciduous woodland overlaps site in several places, particularly in the north. Smaller patches adjacent to or overlapping the perimeter of the southern part of the site. Site around 200 metres from traditional orchard in south east. Ancient woodland: A strip of ancient woodland lies approx. 170m east of the site at the closest point.</p> <p>Ecological Networks: circa 8% of the site (northern area) covered by England Habitat Network (woodland). An additional area lies adjacent to the site to the east; circa 60% of the site lies within the Swale regional GI corridor; circa 20% of the site lies within NY08 Swale Washlands Living Landscape. Key habitats: River Swale, wetlands. Management issues- Aggregate extraction site restoration.</p> <p>Summary of effects on designated sites and important features for biodiversity / geodiversity No</p>	✓	✓	✓	✓	-	-	+
						0	?	

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>significant effect expected on Natura 2000 sites. It is considered that there may be some minor temporary disturbance to the nearby SSSI however the surrounding area has a history of quarrying so disturbance from noise etc. is not expected to be significant. There are potential direct and indirect adverse impacts upon SE29-04 River Swale, Great Langston to Kiplin SINC which lies partly within and adjacent to the site (biodiversity may be affected by the two proposed river crossing points). Up to date ecological surveys will be required in order to identify key features of ecological importance. The SINC boundary for riverine SINC includes the river corridor for completeness but it does not necessarily mean that all habitats within the boundary are of SINC quality. The quarry could then be designed to avoid features of interest, provide mitigation for habitats and species that are affected and ultimately strengthen the SINC through high quality restoration. These impacts and possible mitigation are currently being looked at in the current application but this is not yet complete.</p> <p>The site supports a mosaic of arable farmland, pastoral grasslands, mature hedgerow, mixed plantation, scattered mature trees, wet woodland, small watercourses, wet grassland and tall ruderal habitats. Surveys to support the current planning application at the site have identified bats, nesting birds, brown hare, badger, otter and water vole.</p> <p>In terms of invasive species, both Japanese knotweed and Himalayan balsam are present within the site. The survey work for the current application shows that the extent of both species has increased between the initial 2009 survey and the 2014 update surveys. The proposed development has the potential to increase the spread of these species.</p> <p>This area represents further quarrying in the Swale corridor in addition to existing and past quarries at Ellerton, Kiplin Hall and Scorton. Negative cumulative impacts are considered unlikely to be significant if appropriate mitigation is implemented. Potential cumulative benefits for biodiversity exist provided that restoration schemes are designed appropriately and any measures for biodiversity can be secured as part of the planning process. It is however noted that not all of the site is within the control of the operator so there is some uncertainty as to whether ecological benefits can be realised as part of the restoration scheme (biodiversity restoration is limited to a lake with no surrounding land and MoD restrictions also limit the type</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>of scheme that could be put in place).</p> <p>In summary, in the short term negative impacts are anticipated associated with the loss of habitats and disturbance to a range of species. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and management. Opportunities exist to improve the habitat networks through the creation of high quality priority habitats.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site is not in a Nitrate Vulnerable Zone (NVZ). The site does not lie in a groundwater source protection zone however Source Protection Zone 3 lies circa 40m east of the site. In Humber RBMP SUNO catchment. The nearest RBMP water body is Swale from Muker Beck to Bedale Beck which passes through the northern area of the site. Current ecological status is moderate, with overall potential moderate. Objective is good by 2027. No RBMP lakes. RBMP Groundwater: Site falls between SUNO Millstone Grit and Carboniferous Limestone (quantitative quality good/chemical quality poor) and the SUNO Sherwood Sandstone (Quantitative quality good, chemical quality poor - current overall status poor / good by 2027) and the SUNO Magnesian Limestone (quantitative quality good/ chemical quality good- overall status: good / objective: good by 2015) groundwater bodies.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Summary of effects on water quality The Swale could be a receptor for pollutants (such as fuel or soil / silt particles) during flood events though this is a large watercourse so, given the sorts of pollutants that could be generated and the ability of the river to flush and dilute, risk is seen as relatively minor and mitigatable by good site management and plant maintenance. The existing planning application states that dewatering would be undertaken at the site to allow dry working of the mineral. It concludes that following mitigation, such as the pumping of dewatering discharge water to onsite lagoons where settlement will occur prior to discharge and the regulated discharge of water from the settlement lagoon to compensate for reduction in the groundwater base flow⁶; dewatering would not result in significant adverse impacts and</p>		✓	✓	✓	-	-	?

⁶ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 9- Water Resources: Hafren Water.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	long-term alterations to groundwater flow would not be anticipated following restoration. Impacts are considered to be minor negative in the short and medium term (although it is considered that successful implementation of mitigation and application of good practice measures could offset this). In the long term it is considered that opportunities exist for the improvement of water quality for example through the creation of habitats such as reed bed. Impacts in relation to restoration are however uncertain until a specific restoration plan is agreed.							
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside. Access: Confirmed as being the access as per latest details for application NY/2010/0356/ENV, i.e. at bend at north end of Low Street west on Low Street onto the new Local Access Road; Light Vehicles: 42 two-way movements (as sourced from application details NY/2010/0356/ENV); HGV Vehicles: 336 two-way movements (as sourced from application details NY/2010/0356/ENV);</p> <p>Net change in daily two-way trip generations: Light vehicles 28; HGV: 86. Traffic assessment rating: yellow.</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: Nearest national rail network 7.7km east; Strategic Road: A1 lies adjacent to the site; Canal / Freight waterway: Tees Navigation 17km north-east.</p> <p>Summary of effects on transport HGV movement would be acceptable on to Low Street however works will be required to improve this road to access the local access road (the scope of these works would need to be determined in the traffic assessment/travel plan).</p> <p>As the majority of trips generated by this site would replace trips from the existing Scorton and Ellerton Quarry sites most journeys can be thought of as a continuation of existing impacts (though these impacts will endure for longer than if there were no plan in place).</p> <p>Traffic modelling carried out through the Joint Plan traffic assessment estimates that 75% of demand from this area comes from Teesside and Durham. The route towards Teesside takes a similar amount of time</p>		✓	✓		--	--	0

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>whether by the A1 and A66 or the A684 through Northallerton and then the A19. Without any mitigation the site would generate a high number of traffic movements per day through a significant settlement (and sustainable transport is not likely to contribute to access to the site). A moderate to major negative impact is therefore anticipated in relation to this objective. However, the traffic assessment does suggest mitigation in the form of a routing agreement to route vehicles via a Local Access Road to the A1 or the A684, which would reduce effects down to a non-significant level. Similarly cumulative effects, if the A1 route is taken, have been considered for this site with MJP17 and MJP43 as they join the A1, with overall effects considered insignificant.</p> <p>The site is not likely to generate significant passenger travel demand.</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA.</p> <p>Summary of effects on air quality The existing planning application has assessed all residential properties within 500m of the site for dust impacts. It concludes that following the implementation of mitigation measures which will include damping of haul roads, wheel washing, sheeting of vehicles, vehicle speed restrictions etc., there would be insignificant dust impacts on nearby properties.⁷ Restoration could ultimately improve air quality by habitats absorbing pollutants such as from the A1, though this is not expected to be at a significant level. Air quality impacts from vehicle emissions are not considered as part of the existing planning application however, without mitigation the site could generate significant amounts of traffic which could route through Northallerton (and pass other settlements en route), which could have minor effects on air quality..</p>	✓	✓	✓	✓	-	-	-

⁷ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 10- Air Quality: Wardell Armstrong.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification: circa 30% of site is Grade 2, 65% is Grade 3 and 5% is Grade 4. Greenfield site - no known risk factors for contaminated land. No known mining subsidence risks.</p> <p>Summary of effects on soil / land Extraction operations would result in the temporary loss of circa 136.9ha of agricultural land of which c. 88.9 is best and most versatile land, and the permanent loss of 19ha of best and most versatile land⁸. Impacts are therefore considered to be major negative in the short and medium term as agricultural land is temporarily lost and minor negative in the long term as a result of the permanent loss of BMV land.</p>	✓	✓	✓		--	--	-
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Small patches of deciduous woodland lie onsite and areas lie adjacent to/overlapping the site boundary. Site visit noted the following features on site: grassland / pasture, woodland / copse, hedgerows, standalone trees.</p> <p>Summary of effects on climate change Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and would therefore lead to significant climate change impacts, albeit lessened by this site's excellent proximity to the A1 and northern markets in particular. Restoration is likely to have some potential as a carbon sink.</p>	✓			✓	-	--	-- ? +
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity⁹ of a site Flood defences are present in the northern area of the site. Circa 25% of the site lies in flood zone 3, 5% in flood zone 2 and 70% in flood zone 1. Patches of surface water flooding occur across the site with some small patches (c2%) high (1 in 30) risk, a similar amount (c 2%) medium (1 in 100) risk. About 8-10% of the site is low risk (1 in 1000). Ouse CFMP /</p>	✓		✓	✓	-	-	++

⁸ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 8- Soils and Agriculture: Wardell Armstrong.

⁹ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>Unit: Swale Washlands / Policy 6. Circa 20% of site is in the Swale Washlands Living Landscape.</p> <p>Summary of effects on climate change adaptation Although site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site offer flood storage to the wider catchment. The element of standoff from the river corridor at this site means it is not likely to hinder species movements / form a barrier to the formation of an ecological network.</p>							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Summary of effects on resource usage This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 11.37 million tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue until such time as extraction ceases.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Summary of effects on the waste hierarchy The site would not specifically deal with waste. Soil that is stripped will be stored onsite and used for restoration. No impacts identified.</p>					0	0	0
10. To conserve or	<p>Proximity of historic environment receptors Conservation areas: Kirkby Fleetham 1km south-east; Registered Parks and Gardens: None within 5km; Registered Battlefields: None within 5km; World Heritage</p>	✓		✓	✓	--	--	--

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
enhance the historic environment and its setting, cultural heritage and character	<p>Sites: None within 5km.</p> <p>Scheduled Monuments: 120m north - World War 2 fighter pens and defences at former RAF Catterick (ID 1,020,990); 650m north - Bainesse Roman roadside settlement and Anglian cemetery (ID 1,021,209); 1.15km north-east - Castle Hills medieval motte and bailey castle and 20th century airfield defences (ID 1,020,991); 1.3km south-east - Motte and bailey castle and medieval settlement earthworks within Hall Garth (ID 1,021,103).</p> <p>Listed buildings: 20 listed buildings within 1km (1 grade 1, 2 grade 2* and 17 grade 2). Closest is Stable Block to Killerby Hall (75m at closest point, Grade 2- NHLE NO. 1,295,757) which is surrounded by site on 3 sides. Other listed buildings include those associated with Oran House (approx. 270m north-west) and those associated with Kiplin Hall (approx. 750m north-east).</p> <p>Designed landscapes: Site overlaps with Killerby Hall, Oran House lies adjacent to the site to the north, Kiplin Hall (unidentified parkland) 140m north-east, Kirkby Hall 300m east, Hornby Park (unidentified parkland- designer Lancelot 'Capability' Brown) 1.65 km south-west.</p> <p>HLC Broad type - Enclosed land; HLC Type – Modern improved fields and piecemeal enclosure; Undesignated archaeology in this area includes evidence for early prehistoric human activity including being a focus of early hunter-gatherer activity. There is also evidence of Roman, medieval and post-medieval activity across the allocation site.</p> <p>Summary of effects on the historic environment The site allocation has two HLC types, 'modern improved fields' and 'piecemeal enclosure'. The second HLC type is significant, of which the legibility is significant. The majority of this area would be lost through mineral extraction. It is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. The proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area as 17% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the early</p>					?	?	?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	prehistoric period onwards. The site has been subject to an archaeological field evaluation, and allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. It is assumed that the archaeological impact will occur throughout the duration of extraction and will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant.							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10 km; AONBs: None within 10km; Heritage Coast: None within 10km; ITE land: None within 5km; Local Landscape Designation: None (however, part of the site did have a local landscape designation under the previous Hambleton Local Plan).</p> <p>NCA: The site lies within the Vale of Mowbray; NY&Y LCA: The site is partly within Landscape Character Type 24: River Floodplain (northern 50% of site) and partly within LCT 25 Settled Vale Farmland (southern 50% of site); Hambleton LCA: Most of site is in Hambleton and lies in a landscape character type called 'intensively farmed lowland (simple topography) - Intermediate enclosure 5b'.</p> <p>Intrusion: Around 25% of the site is classed as undisturbed and the remaining 75% is classed as disturbed. Light pollution is relatively low – 50-55 on the CPRE scale of 1-255 (1=dark), although this was assessed in 2000, and may now have worsened due to increased activity in the A1(M) corridor.</p> <p>The site is largely screened by topography, and by vegetation and flood banks along the River Swale. Areas to the west are locally visible from the A1(M) and rising ground to the west of the A1(M).</p> <p>Summary of effects on landscape / townscape No impacts on nationally or locally designated landscapes. Marne Barracks at Catterick, and the village of Kirkby Fleetham are within around 1 km of the site, however their settings are considered unlikely to be adversely affected.</p> <p>This extensive site would be the first, in a large cluster including the existing Scorton, Ellerton and Kiplin Hall Quarries, to be located to the south of the River Swale. The site would affect two local designed landscapes at Killerby Hall and Oran House. It would affect an area of small scale topographical variation resulting from</p>	✓	✓	✓	✓	--	--	-

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>glacial and fluvial processes.</p> <p>In terms of visual intrusion, the site is largely screened, however part of site will be visible from the A1(M), and from higher land to the west of the A1(M). The site lies within the A1(M) corridor and within the Leeming Airfield and Catterick 'military zone', however the immediate locality between Killerby Hall and the nearby Kirkby Fleetham Hall is private and relatively undisturbed.</p> <p>Overall, it is considered that major negative impacts would occur in the short and medium term as there would be a significant local change in character, with the establishment of the processing plant site to the south of the River Swale, temporary bridges connecting the site with Ellerton Quarry, and phased sand and gravel extraction. In the long term, a minor negative impact is anticipated as the natural character of the landscape would be irreversibly changed (the restoration scheme would result in the creation of a water body between Oran House and Killerby Hall which is considered would look out of place), although the Killerby Hall parkland and some of its surrounding ridges would remain.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Summary of effects on sustainable economic growth</u> This site would ultimately result in 11.37 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight jobs). Restoration, combined with that of other nearby sites might create something of a minor tourist attraction.</p>	✓	✓	✓	✓	++	++	+
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD area- Leeming Bar, Brompton-on-Swale and Scorton. Not in most deprived 20%. Kirkby Fleetham is the nearest Settlement 900m south-east. Ellerton-on-Swale lies 900m north, Kiplin lies 900m east and Catterick lies 1.2km north-west.</p> <p><u>Summary of effects on vitality / viability</u> The site would support a number of jobs leading to minor positive impacts in the short and medium term. Whilst the site would provide a source of sand and gravel which could aid future development, it is considered that the immediate settlements are unlikely to directly benefit. In the long term it is considered that the restoration scheme has the potential to boost tourism in the</p>	✓	✓		✓	+	+	+

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	area through the creation of new bridleways / rights of way (8.8km of new routes are included in current planning application) and through the recreational use of the restored site area.							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Footpath 10.78/1/1 runs through the middle of the site to Killerby Hall. Footpath 10.84/14/1 runs along the southern boundary of the site and joins 10.78/1/1. Footpath 10.84/15/2 also meets 10.78/1/1 at the southern site boundary. Bridleway 20.2/11/1 begins circa 50m from the site boundary on the other side of the A1. No common land or village greens within 500m.</p> <p>Summary of effects on recreation, leisure and learning Footpath 10.78/1/1 would be diverted. Users of this right of way would experience a direct impact as a result of the diversion. Visual amenity and noise impacts would also be anticipated, however the location of the site adjacent to the A1 means that background noise levels are already elevated. Dust has the potential to impact upon users of nearby rights of way however a number of mitigation measures (as set out under objective 4 above) will be implemented. Overall, impacts are considered to be minor negative during the operation of the site and minor to major positive in the long term, due to the potential increase in recreational land and public access.¹⁰</p>	✓	✓	✓		-	-	+ ++
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Nearest settlements: Kirkby Fleetham lies 900m south-east, Ellerton-on-Swale lies 900m north, Kiplin lies 900m east, Catterick lies 1.2km north-west. No Hospitals, clinics or health centres within 1km. Several individual properties including Killerby Hall 30m from boundary, Killerby Farm partly within site boundary, Oran House 250m north, Kiplin Hall 700m north-east, property at Hookcar Hill 200m east, Hook House Farm 120m south, and Glebe Farm, Glebe Cottage and Killerby Cottages adjacent to the site.</p> <p>Summary of effects on health and wellbeing A noise survey has been carried out as part of the existing planning application. The survey found that noise levels can conform to the criterion given in Minerals Policy Statement 2 (traffic noise from the A1 means that noise levels in the area are already elevated). Noise control measures would also be put in place including the use of soil storage mounds as acoustic</p>		✓	✓	✓	-	-	0

¹⁰ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 14- Access and Recreation: Wardell Armstrong.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	barriers, stand-off distances between receptors and plant and noise monitoring. Following the implementation of dust control measures, dust impacts are considered to be insignificant. The site is relatively well screened however some visual amenity impacts are anticipated and an increase in traffic to the site may lead to a negative impact in terms of health and safety of other road users and (if traffic from the site head east, exposure of a number of population receptors (including parts of Northallerton) to slightly increases air pollution. Overall impacts are considered to be minor negative before mitigation during the operation of the site. As the site restoration would involve the creation of water bodies, nearby airfields (Catterick Airfield, Croft Airfield and Leeming MOD) would need to be consulted due to the increased risk of bird strike.							
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Flood defences are present in the northern area of the site. Circa 25% of the site lies in FZ3, 5% in FZ2 and 70% in FZ1. Patches of surface water flooding occur across the site with some small patches (circa 2%) high (1 in 30) risk, a similar amount (circa 2%) medium (1 in 100) risk. About 8-10% of the site is low risk (1 in 1000). Site is in Ouse CFMP / Unit: Swale Washlands / Policy 6.</p> <p>Summary of effects on flooding Although the site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site to offer flood storage to the wider catchment, although there is some uncertainty over the capacity of storage that would be provided as the quarry void may simply fill with groundwater following dewatering.</p>	✓		✓		-	-	++ ?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Summary of effects on a changing population The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the plan area.</p>		✓	✓		++	++	0

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
Cumulative effects	<p><u>Cumulative / Synergistic effects</u></p> <p><u>Planning context:</u> Kirkby Fleetham (Hambleton) is the nearest Settlement 900m south-east. Ellerton-on-Swale lies 900m north (Richmondshire), Kiplin (Hambleton) lies 900m east and Catterick lies 1.2km north-west in Richmondshire. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Site allocations not yet finalised in Richmondshire. In Hambleton, no allocations lie within 200m of this site.</p> <p><u>Other Joint Minerals and Waste Plan Sites:</u> MJP33 is adjacent to east, MJP17 is 300m west, MJP46 is 500m north, MJP62 is 800m north and MJP60 is 600m south.</p> <p><u>Historic Minerals and Waste Sites:</u> The site lies within an area that has undergone extensive quarrying including at the Ellerton, Kiplin Hall, Scorton and Manor House Farm quarries along with extraction at the River Swale in the 1950s, and slightly further away, but within 2km, there are 2 historic landfill sites. Other major development in the area includes the A1 upgrade which is currently under construction.</p> <p>It is considered that this allocation along with existing minerals sites, potential minerals sites and other major developments could give rise to a number of cumulative impacts:</p> <p>Hydrological impacts: several sites are located along the River Swale and it is considered that pollution/sedimentation may have a cumulative impact on this water body. Following restoration there is the potential for a major positive impact in relation to the provision of additional flood storage which could have beneficial impacts further down the catchment.</p> <p>Landscape Impacts: in combination with other sites, large areas of the landscape are being irreversibly</p>							
		✓	✓	✓	✓	-	-	+
						--	--	++
		✓		✓		--	--	--
			✓		✓	+	+	0

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score			
		P	T	D	I	S	M	L	
	<p>changed from their natural character, a major negative cumulative impact.</p> <p>Economic Impacts: Should this allocation/other proposed sites in the area go ahead, there is the potential for positive synergistic effects including the use of quarry plant at other sites (it is proposed that the rest of the reserves at the Ellerton site would be worked via the proposed Killerby site.</p> <p>Cultural Heritage/Archaeology: the area has high archaeological potential and the cumulative loss of this resource in this area constitutes a major negative cumulative impact. There are also a number of historic buildings / areas of parkland in this area and cumulative visual/setting impacts are likely to occur.</p> <p>Biodiversity: cumulative impacts may occur due to loss of habitats and disturbance to species. Overall this may equate to the loss of an ecological network. In the longer term there are significant opportunities to provide benefits for biodiversity through the creation of priority habitats and the integration of sites in the area as a coherent ecological network.</p>	✓		✓		--	--	-	
		✓		✓		-	-	++	
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.								
Score									
++	The Site option is predicted to have major positive effects on the achievement of the SA objective. For example, this may include a significant contribution to issues or receptor of more than local significance, or to several issues or receptors of local significance.								
+	The Site option is predicted to have minor positive effects on achievement of the SA objective. For example, this may include a significant contribution to an issue or receptor of more local significance.								
0	The Site option will have no effect on the achievement of the SA objective ¹¹ .								

¹¹ This includes where there is no clear link between the site SA objective and the site

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score						
		P	T	D	I	S	M	L
-	The Site option is predicted to have minor negative effects on the achievement of the SA objective. For example, this may include a negative contribution to an issue or receptor of local significance.							
--	The Site option is predicted to have major negative effects on the achievement of the SA objective. For example, this may include a significant negative contribution to an issue or receptor of more than local significance.							
?	The impact of the Site option on the SA objective is uncertain.							

Mitigation requirements identified through Site Assessment process
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues • Design to mitigate impact on best and most versatile agricultural land • Design of development and landscaping of site to mitigate impact on: heritage assets (Scheduled Monuments, archaeological remains, Listed Buildings, Conservation Area, Registered and unregistered park and gardens), local landscape features and their respective settings • Design to include suitable flood risk assessment, attenuation and surface water drainage • Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) • Design to include suitable arrangements for access and local roads • Appropriate arrangements for control of and mitigation of the effects of noise, dust, etc. • Appropriate restoration scheme using opportunities for habitat creation

MJP17 – Land to the South of Catterick

Site Name	MJP17 Land to south of Catterick (between Leases Lane, Rudd Hall Farm, Ghyll Hall, Hackforth Lodge, Lords Lane, Goskins Plantation, Sowber Hill Farm and A1), Richmondshire and Hambleton
Current Use	Agriculture
Nature of Planning Proposal	Extraction of Sand and Gravel
Size	102.1 ha
Proposed life of site	Unknown at present
Notes	Proposed new quarry. Possible restoration: lakes potentially for conservation and recreation, agriculture, grassland and woodland.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geodiversity and improve habitat connectivity	<p><u>Proximity of international / national and local designations and key features.</u> 13km to west of site is North Pennine Moors SPA/SAC. SSSI: 2.26 km from nearest SSSI (Swale Lakes). SINC: Limekiln Wood SINC (1 km) (deleted), River Swale, Great Langton to Kiplin SINC (0.93 km).</p> <p>Priority Habitat: Deciduous woodland adjacent (slight overlap) to south east of site. Deciduous woodland also 170m away from south-west of site. Site visit found pond, grassland, arable, woodland/copse, hedgerows and standalone trees on site. Networks: England Habitat Network (woodland) adjacent to south-east corner of site with slight overlap with site boundary. GI: Site not within green infrastructure corridor, though the Swale Regional GI corridor lies in close proximity to the site (within 25m of north-east corner) in Richmondshire.</p> <p><u>Summary of effects on designated sites and important features for biodiversity / geodiversity.</u> Considering possible sources, pathways and receptors for impacts, for this site it is considered that there would be no significant effect on any Natura 2000 site.</p> <p>Based on the habitats that appear from aerial photographs to be within / adjacent to the site (arable,</p>	✓	✓	✓	✓	0	0	0
						-	-	+

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>pasture, deciduous woodland, mature trees, hedgerows, ponds, drainage ditches) protected species that could be affected include: bats, badgers, nesting birds and amphibians (e.g. great crested newt).</p> <p>The proposed possible restoration is for lakes potentially for conservation and recreation, agriculture, grassland and woodland. Potentially this could deliver important biodiversity benefits, including the creation of priority habitats, provided it is implemented sympathetically with expert advice and with long term management.</p> <p>In summary, there are possible impacts to protected species in the short and medium term. Long term impacts depend on restoration.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p><u>Proximity of water quality / quantity receptors.</u> Site not in an NVZ or source protection zone. Site is in Humber (SUNO) RBMP. Nearest RBMP water body is 'Scurf Beck from Source to Bedale Beck' 575m to the south of the site (current ecological status is moderate, with overall potential moderate and the objective is good by 2027) while 'Swale from Muker Beck to Bedale Beck' passes to the north east of the site (Current ecological status is moderate, with an overall potential of moderate. Objective is good by 2027). No RBMP lakes. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p><u>Summary of effects on water quality.</u> The site is separated by fields from the nearest water bodies, however, to the south it drains to the 'Scurf Beck / Bedale Beck' unit. This could lead to possible run off from the site or it could change the drainage regime and thus the flow rate of this water body. Moreover, this large site, if wet worked, could impact on groundwater, either from removing the protection to the underlying groundwater making pollution possible (e.g. if fuel spilled) or could alter groundwater flow, which would have unknown effects on nearby water bodies. The groundwater status is already good which may moderate the significance of this effect to a degree. Detailed survey would be needed to remove this uncertainty.</p>	✓	✓	✓		-- ?	-- ?	- ?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors. Site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside. Access: Confirmed as being not known yet, but will take account of the new A1(M) roundabout in order to access the strategic road network; Light Vehicles: not yet known but NYCC have estimated 10-18 daily movements; HGV Vehicles: not yet known but NYCC have estimated 72-121 two-way daily movements.</p> <p>Net change in daily two-way trip generation: light vehicles; 0 HGVs: 0. Traffic assessment rating: yellow.</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 4.7km south (nearest station Leeming Bar 5.4km south-east); Strategic Road: A1 lies adjacent to the site; Canal / Freight waterway: Tees Navigation 20km north-east.</p> <p>Summary of effects on transport. According to the traffic assessment <i>“The submission has been put forward as a replacement for when mineral reserves at MJP21 have been exhausted. In turn, submission MJP21 would have replaced the existing Scorton and Ellerton quarry sites and therefore whilst trips from the site would be additional on the local road network (because of the different access locations), the submission site would replace trips already on the A1 from the existing sites”.</i></p> <p>_Access to the existing highway is currently unknown and will need to be determined by a traffic assessment. Preferred access for the site would be from the local access road which will run to the south west of the site. Works will be required to improve the existing road and extend existing footway / street lighting to improve safety at the site access.</p> <p>The Joint Plan’s traffic assessment has highlighted that 75% of demand from this area is drawn towards Teesside and the North East. According to that assessment <i>“The access to the site is unknown and it is also unknown if traffic from the site would utilise the Local Access Roads which will run parallel to the A1. If traffic from the site does utilise the Local Access Roads then the impacts of the site are likely to be minor with the local highway network avoiding passing sensitive receptors and designed to cater for future traffic levels. However, if traffic from the site does route to the west via Catterick Lane then it is likely that the site</i></p>		✓		✓	-	-	-
						--	--	--
						?	?	?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<i>would result in significant impacts with HGVs passing through communities and potentially requiring highway upgrades</i> ¹² . . Up to a moderate negative impact is anticipated with considerable uncertainty until a site specific traffic assessment has been completed and the site access route has been determined. The traffic assessment also predicts that cumulatively MJP17, MJP21 and MJP41 will generate insignificant effects on the A1 junctions.							
4. To protect and improve air quality	<p>Proximity of air quality receptors. Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA.</p> <p>Summary of effects on air quality. There are several small farms, Rudd Hall and Ghyll Hall close by that could be at risk of dust (particularly during construction and restoration phases, though less so during the operational phase if this site is wet worked (uncertain)). Settlements such as Hackforth (280m south) and East Appleton (650m west) are also relatively close and may be at a lesser risk of occasional dust. , If traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in significant impacts with HGVs passing through communities (creating minor impacts on local air quality). This impact would not occur, however if traffic utilised the local access roads.</p>		✓	✓		-- ?	-- ?	-- ?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors. 80% of land is in ALC Grade 3. 20% (in southern part) in Grade 4. No known land instability. Greenfield site. No known risk factors for contaminated land.</p> <p>Summary of effects on soil / land. Although there is some uncertainty over whether the Grade 3 land at this site is Best and Most Versatile Land (it could be grade 3a or grade 3b), there is at least the potential for up to 817 ha of BMV to be lost. Restoration to lakes may permanently remove the productive potential of some of this land. If other sites in this area are also progressed a large amount of high quality farmland could be lost.</p>	✓	✓	✓		-- ?	-- ?	-- ?

¹² Jacobs, 2015. Minerals and Waste Joint Plan Traffic Assessment.

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change. Deciduous woodland adjacent (slight overlap) to south east of site. Deciduous woodland also 170m away from south-west of site. Site visit found woodland / copse, hedgerows and standalone trees on site.</p> <p>Summary of effects on climate change. Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and would therefore lead to significant climate change impacts, albeit lessened by this site's excellent proximity to the A1 and northern markets in particular.</p>	✓			✓	-	-	-
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity¹³ of a site. Very small areas (c 1%) at south eastern edge in flood zone 3. A further 1% (same area) in Flood zone 2. High risk (1 in 30) surface water flooding affects around 5% of the site, in patches and following contours across the site. A further 2% is at 1 in 100 risk and a further 5% is at 1 in 1000 risk. The England Habitat Network (woodland) is adjacent to the south-east corner of site with a slight overlap with site boundary. CFMP: Ouse CFMP / Unit: Swale Washlands / Policy 6.</p> <p>Summary of effects on climate change adaptation. EHN is patchy in this area, so site will not make much difference to the capacity of the landscape for species movement under climate change (notwithstanding the large impact that a site such as this could have on the movement patterns of individual animals and plants). The site is also water compatible so flood risk is considered to be insignificant. In the long term this site could create quite a large patch of habitat which could contribute to the adaptive capacity of local biodiversity. The site is largely outside of the floodplain, so little potential for significant future flood storage exists.</p>	✓			✓	0	0	+
8. To minimise the use of resources and	<p>Proximity of factors relevant to the resource usage of a site. No spatial factors identified.</p> <p>Summary of effects on resource usage. This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel.</p>	✓		✓		-	--	--

¹³ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
encourage their re-use and safeguarding	However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 4.2 million tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively.							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Summary of effects on the waste hierarchy</u> The site would not deal with waste and no details are provided of how waste would be managed on site.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors.</u> Conservation areas: none within 1km; Registered Parks and Gardens: Hornby Castle Park (Grade 2) 5m west of site; Registered battlefields: None within 5km; World Heritage Sites: None within 5km; Scheduled monuments: 450m north-east - World War 2 fighter pens and defences at former RAF Catterick (ID 1,020,990), 650m north - Bainesse Roman roadside settlement and Anglian cemetery (ID 1,021,209), 1.15km north-east - Castle Hills medieval motte and bailey castle and 20th century airfield defences (ID 1,020,991), 1.5km W- Round Barrow 570m north of Winterfield House (ID 1,021,213), 2km west- Round barrow 650m north-west of Winterfield House (ID 1,021,212); Listed buildings: 12 Listed buildings within 1km (all Grade 2). Nearest 130m east (Ghyll Hall - NHLE No. 1,295,789).</p> <p>Named designed landscapes (from pre validated dataset derived from HLC): 2 within 2km: immediately adjacent to west is Hornby Park (HNY4249) designed landscape / unidentified parkland (Capability Brown). Killerby Hall (no recorded information) is 200m East.</p> <p>HLC Broad type - Enclosed land; HLC Type – Modern improved fields / Unknown planned enclosure.</p>	✓		✓	✓	--	--	--
						?	?	?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Undesignated archaeology surrounding this allocation site include prehistoric activity including significant Mesolithic activity including flint scatters, later prehistoric pits and ditches, Romano-British activity and settlement associated with Dere Street Roman Road and medieval settlements and associated field systems. Post medieval settlement and field systems are also present within this landscape.</p> <p>Summary of effects on the historic environment. The site allocation has two HLC types, modern improved fields and unknown planned enclosure. Part of the allocation site is modern improved fields and is a smaller part of a larger area of similar character type, of which the legibility is fragmentary. The second HLC type is unknown planned enclosure, of which the legibility is invisible. The majority of this area would be lost through mineral extraction. The proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 17% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p>It is assumed that the archaeological impact will occur throughout the duration of extraction and will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant.</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: Yorkshire Dales 9.8 km away; AONBs: None within 10km; Heritage Coast: None within 10km; ITE Land: None within 5km; Locally protected landscape: No.</p> <p>NCA: Vale of Mowbray; NYLCA: 90% of site in landscape character type 25 (Settled Vale Farmland); Local LCA: North half of site is in Richmondshire (no LCA), south is in Hambleton. This is a category called 'intensively farmed lowland (varied topography)'.</p> <p>Summary of effects on landscape / townscape. Although the possible allocation won't impact on designated landscapes it is adjacent to Hornby Castle Park, a historic designed landscape influenced by Capability Brown which was put on the EH Register in 2014 (grade II). It is undergoing long-term restoration. Visitors to Hornby Castle Park (which has deer and bison herds, and permissive access across the C18th park) may be affected. The site is within the setting of both Hornby Park and Lord's Lane, a tree-lined unimproved lane which lies to the south of the proposed mineral site, which formerly linked Hornby Castle with the A1 (the current minor road within the deer park was previously a private drive west of Hackforth Lodge). Minor lanes may be used by cyclists and walkers.</p> <p>The site is only 0.3 km from the hamlet of Hackforth at its nearest point. Mineral extraction could potentially affect the setting.</p> <p>It is unlikely that the whole of this long site could be accommodated by the landscape. The area is sensitive because of its proximity to Hornby Castle Park although the degree of inter-visibility is still to be established. The site's landscape context was assessed as 'good' or 'very attractive' in the scenic quality assessment in the 2006 ES for the A1(M) Dishforth to Barton upgrade, although the land largely consists of large, relatively open fields. It has not previously been affected by mineral extraction, as far as is known. The land is undulating, with some minor ridges and it is not clear how much of the site would be visible from the A1(M). Intrusive mineral extraction within the A1(M) corridor could adversely affect perceptions of North Yorkshire by those passing through (some of whom will potentially be tourists). This would be compounded by views of mineral extraction to the east of the A1(M) at Killerby (MJP21).</p>	✓	✓	✓	✓	-- ?	-- ?	-- ?

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>In terms of visual intrusion, the area is not particularly high or prominent, but there could be direct or oblique views by travellers on the upgraded and partly diverted A1(M) as it lies within the road corridor. The area is disturbed, mainly by the A1(M). Light pollution was assessed by the CPRE in 2000 as 58 on a scale of 1-255, with 1 representing maximum darkness. However this low-moderate assessment will now be out of date, given the increase in traffic and activity in the A1(M) corridor. Traffic from this site is expected to change the character of the local area as there is no mineral extraction in this area currently.</p> <p>Uncertainty is noted as this assessment is made without the benefit of an LVIA, and takes into account the effect of introducing mineral extraction into greenfield land which includes the setting of a registered parkland. Phasing of the work, intervening topography and blocks of woodland may reduce impact in practice, but the situation of having quarrying on both sides of the A1(M) within the same timescale should be avoided if possible.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is very close to the A1 giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Summary of effects on sustainable economic growth</u> This site would ultimately result in 4.2 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). Restoration, combined with that of other nearby sites might create something of a minor tourist attraction.</p>	✓	✓	✓	✓	++	++	++
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability.</u> IMD Area is Hornby Castle - not in most deprived 20%.</p> <p>East Appleton is the nearest settlement at 620m east while Catterick is 1.2km north. Catterick Garrison 4.6km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total.</p> <p><u>Summary of effects on vitality / viability.</u> This is a large site that could support a modest amount of jobs in</p>	✓	✓	✓	✓	++	++	++

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	extraction and freight. It would also supply a useful supply of building materials to support the planned growth in housing stock in Catterick Garrison and other nearby settlements. Restoration may provide a useful community resource.							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors. Bridleway 10.61/3/1 runs across centre of site (although this route is a dead end). Next nearest Bridleway 20.2/9/1 runs 570m west; No draft common land / village greens within 500m.</p> <p>Summary of effects on recreation, leisure and learning. A bridleway would need to be diverted (albeit one that is not likely to be used very much), while the site may be visible from the western bridleway. As part of the A1 improvements, a bridleway route is being created and Leases Lane which runs along the northern boundary of the site will act as a link to this. Should the site be accessed from this lane, negative impacts would also be anticipated upon bridleway users utilising this link road.</p>	✓		✓		-	-	-
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing. No schools or health centres within 1km. Nearest settlements are Hackforth at 250m south, and East Appleton 650m West.</p> <p>Summary of effects on health and wellbeing. Several isolated farms and building lie within possible range of dust and noise impacts, while traffic from the site may lead to noise, dust, vibration and reduced road safety affecting a small number of receptors. Restoration may improve wellbeing by creating accessible countryside.</p> <p>_If traffic from the site utilises Catterick Lane to the west rather than planned future local access roads then it is likely that the site would result in significant impacts with HGVs passing through communities such as Great Crakehall (creating minor impacts on local air quality for example, as well as increasing the possibility of accidents). This impact would not occur, however if traffic utilised the local access roads.</p>	✓	✓	✓		-	-	- +

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones. Very small areas (c 1%) at south eastern edge in flood zone 3. A further 1% (same area) in flood zone 2. High risk (1 in 30) surface water flooding affects around 5% of the site, in patches and following contours across the site. Site in Ouse CFMP / Unit: 'Swale Washlands' / Policy 6.</p> <p>Summary of effects on flooding. Site is water compatible and flood risk is low. Insignificant.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population. The site does not conflict with any known allocations in other plans.</p> <p>Summary of effects on a changing population. The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the plan area.</p>		✓	✓		++	++	++
Cumulative effects	<p>Cumulative / Synergistic effects.</p> <p><u>Planning Context:</u> East Appleton is the nearest settlement at 620 m east while Catterick is 1.2 km north (both Richmondshire). Catterick Garrison 4.6 km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total. Site allocations not yet finalised in Richmondshire.</p> <p><u>Other Joint Minerals and Waste Plan Sites:</u> MJP21 260m east, MJP62 2.1km north-east and MJP33 1.95km north-east.</p> <p><u>Historic Minerals and Waste Sites:</u> Active or dormant minerals and waste sites lie within 2km including Manor House Farm active quarry (1.2km north-east) and historic extraction at the River Swale (1.13 km</p>							

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>north-east). An historic landfill site is located 1km north-west and a waste water treatment works granted in the 1990s lies 700m to the south.</p> <p>As this site is near several other large sand and gravel sites such as MJP21, MJP33, MJP60 and MJP43. This will lead to cumulative impacts in relation to soils (large overall loss).</p> <p>There will also be cumulative traffic impacts (congestion and emissions).</p> <p>In relation to landscape there is a cumulative deleterious effect on perceptions of area in particular.</p>	✓		✓		--	--	--
			✓		✓	-	-	-
						?	?	?
		✓	✓	✓		--	--	--
						?	?	?
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.							
Score								
++	The Site option is predicted to have major positive effects on the achievement of the SA objective. For example, this may include a significant contribution to issues or receptor of more than local significance, or to several issues or receptors of local significance.							
+	The Site option is predicted to have minor positive effects on achievement of the SA objective. For example, this may include a significant contribution to an issue or receptor of more local significance.							
0	The Site option will have no effect on the achievement of the SA objective ¹⁴ .							

¹⁴ This includes where there is no clear link between the site SA objective and the site

Proposed Sustainability Objective	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score						
		P	T	D	I	S	M	L
-	The Site option is predicted to have minor negative effects on the achievement of the SA objective. For example, this may include a negative contribution to an issue or receptor of local significance.							
--	The Site option is predicted to have major negative effects on the achievement of the SA objective. For example, this may include a significant negative contribution to an issue or receptor of more than local significance.							
?	The impact of the Site option on the SA objective is uncertain.							

Mitigation requirements identified through Site Assessment process
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues • Design to mitigate impact on best and most versatile agricultural land • Design of development and landscaping of site to mitigate impact on: heritage assets (Scheduled Monuments, archaeological remains, Listed Buildings, Registered and unregistered park and gardens), village, landscape features and their respective settings and users of the A1 • Design to include suitable arrangements for access and local roads taking account of the upgrades to the A1 • Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) • Design to include suitable flood risk assessment, attenuation and surface water drainage • Appropriate arrangements for control of and mitigation of the effects of noise, dust, etc. • Appropriate restoration scheme using opportunities for habitat creation